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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/748,347

12/30/2003

Choong-Suk Ok

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7805

7590

10/05/2004

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EXAMINER

ELLINGTON, ALANDRA

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/748,347

Applicant(s)

OK ET AL.

Examiner

Alandra Ellington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☒ Claim(s) 2 and 4 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/30/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figures 1, 2a and 2b should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

3. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

4. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it contains legal phraseology such as "disclosed" (pg. 10 line 3) and "comprises" (pg. 10 lines 4,8). Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (5,012,689) in view of Noguchi et al (5,270,628).

a. With respect to Claim 1, Smith discloses a vehicle foot pedal actuating device with a robot 10 having a robotic arm 32 that moves according to a moving track of the pedal 16 while the posture of the robotic arm 32 is controlled (col. 5 lines 65-68, col. 6 lines 1-17, col. 7 lines 22-31, 45-49 {Figs. 2-5}), and an indicating means 110 attached to the robotic arm 32 that indicates the position of the robotic arm 32 (col. 8 lines 38-42, 54-60). However, Smith does not teach a load cell that detects a pedal-pushing force applied to the pedal. Noguchi et al teaches a brake pedaling force value generator 16 and a brake pedal force stroke converter 17 that are attached to a robotic arm 34 for detecting a pedal-pushing force applied to a pedal (col. 5 lines 24-65, col. 6 lines 21-54 {Fig. 2}).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith with the teachings of Noguchi et al to include a pedal-pushing force detecting means that is applied to a pedal for the

purpose of accurately controlling the amount of force is applied to the brake pedal (see Noguchi et al, col. 5 lines 24-65, col. 6 lines 21-54 {Fig. 2}).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (5,012,689) in view of Noguchi et al (5,270,628) as applied to claim 1 above, and further in view of Kaptur et al (3,147,617).

a. With respect to Claim 3, Smith discloses a vehicle foot pedal actuating device with a robot 10 having a robotic arm 32 that moves according to a moving track of the pedal 16 while the posture of the robotic arm 32 is controlled (col. 5 lines 65-68, col. 6 lines 1-17, col. 7 lines 22-31, 45-49 {Figs. 2-5}), a connection bracket 36 fixed to the pedal 16 (col. 5 lines 54-64, col. 6 lines 18-33 {Figs. 1-3}), a rod 32 having one end connected to an indicating means 110 and one end attached to the connection bracket 36 ({Figs. 1-3}). Noguchi et al teaches a brake pedaling force value generator 16 and a brake pedal force stroke converter 17 that are attached to a robotic arm 34 for detecting a pedal-pushing force applied to a pedal (col. 5 lines 24-65, col. 6 lines 21-54 {Fig. 2}). However, Smith in view of Noguchi et al does not teach a pin for connecting the connecting bracket and the rod.

Kaptur, Jr. et al teaches a foot pedal device with a rod 32 that is pivoted by the pin 34 (col. 2 lines 16-28, col. 4 lines 26-40 {Figs. 1,2}).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Smith in view of Noguchi et al with the teachings of Kaptur, Jr. et al to include a pin for connecting a connecting

member and a rod for the purpose of determining the angular relationships of the contact member in order to obtain an efficiently operating pedal device (see Kaptur, Jr. et al, col. 1 lines 10-15, col. 4 lines 26-40).

Allowable Subject Matter

9. Claims 2 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The reasons for the indication of allowable subject matter are based on the inclusion of:

- a. In Claim 2, *a roller fixed to the end of the load cell* for minimizing frictional force generated at the measured surface of the pedal.
- b. In Claim 4, a rod provided at the end thereof having *a pin inserted therethrough with a bearing* so that the rod can be smoothly rotated about the connection bracket.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Noguchi et al (5,394,743) discloses a robot used to simulate driving of a motorcar.
- b. Sugimoto (4,495,801) discloses a manipulator for shifting speed changing gears in automotive vehicles.

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c. Witt (5,172,589) discloses a robot driver.

d. King et al (4,621,525) discloses an accelerator pedal actuator system.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alandra Ellington whose telephone number is (571) 272-2178. The examiner can normally be reached on Monday - Friday, 7:30am - 4:00pm.


13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 2855



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